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10/618,118	07/11/2003	Pierluigi Pugliese	31	4099

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EXAMINER

HICKS, MICHAEL J

ART UNIT PAPER NUMBER

2165

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/618,118

Applicant(s)

PUGLIESE, PIERLUIGI

Examiner

Michael J. Hicks

Art Unit

2165

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION:

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1-21 Pending.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 21, the phrases "control means comprising a key board with at least some keys respectively assigned to specific menu items" and "wherein the control means comprises a touch sensitive display or is speech-operated" both appear. This leaves question as to whether the control means is meant to comprise 'a keyboard with assigned keys *or* a touch sensitive display *or* is a speech operated control means' or is meant to comprise 'a keyboard with assigned keys *and* a touch sensitive display *or* is a speech operated control means'. Because the alternative version is distinctly pointed out in the claim and the inclusive version is not, for the purpose of further examination, Examiner will take Claim 21 to mean the control means comprises 'a keyboard with assigned keys *or* a touch sensitive display *or* is a speech operated control means'.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-21 rejected under 35 U.S.C. 102(b) as being anticipated by Sears et al. ("Split Menus: Effectively Using Selection Frequency to Organize Menus", ACM Transactions on Computer-Human Interaction, Vol. 1, No. 1, March 1994 Pages 27-51 and referred to hereinafter as Sears).

As per Claim 1, Sears discloses a method of providing selectable access to a predetermined number of menu items prearranged within an operating menu structure implemented in an electronic device (i.e. *"Menus are an increasingly popular way of interacting with computers... The font menus contained 28 items."* The preceding text excerpt clearly indicates that menus provide selectable access to menu items within a computer system/operating menu structure implemented in an electronic device, and that menus may have a predetermined number of menu items.) (Page 27, Paragraph 1; Page 36, Paragraph 2) comprising, adapting the menu structure by rearranging menu items dependent on the respective selection rate of said menu items (i.e. *"Several researchers have suggested organizing menu items by how frequently they are selected."* The preceding text excerpt clearly indicates that menu structure (e.g. the organization of the menu items) may be rearranged based/dependent on how frequently they are selected (e.g. the respective selection rates of the menu items).) (Page 28, Paragraph 3).

As per Claim 2, Sears discloses the step of adapting comprises the step of moving a menu item in response to the respective selection rate (i.e. *"Frequency based orderings typically refer to placing the most frequently used item at the top of the of the menu, followed by the next most frequently used item. This continues until all items are places in the menu."*) The preceding text excerpt clearly indicates that if the respective selection rate (e.g. frequency of selection) of a particular menu item were to change, that it may cause a move in its position. For example, if a menu item were to change from being the second most selected item to them most selected item in the menu, it would be moved to the top of the menu.) (Page 29, Paragraph 4).

As per Claim 3, Sears discloses the step of adapting comprises the step of ordering selected menu items dependent on their selection rates (i.e. *"Frequency based orderings typically refer to placing the most frequently used item at the top of the of the menu, followed by the next most frequently used item. This continues until all items are places in the menu."*) The preceding text excerpt clearly indicates that the ordering of the menu items is dependent upon their selection rate (e.g. frequency) in that the most frequently selected menu items are placed at the top of the list, descending until the least frequently selected menu item is placed at the bottom of the list.) (Page 29, Paragraph 4).

As per Claim 4, Sears discloses a learning mode is activated by selecting a corresponding menu item prior to adapting the menu structure (i.e. *"Tables II-IV describe how frequently each menu item was selected for each of the three menu organizations for Distributions One, Two, and Three respectively."*) The preceding text excerpt along with tables II-IV clearly indicate that a learning mode is activated by menu selections (e.g. a tracking of the number of times each menu item is selected) prior to adapting the menu structure (e.g. this data would have to be collected in order to

determine the frequency of menu items, which is needed to perform the frequency ordering).) (Page 38, Paragraph 3; Page 39, Figures II-IV).

As per Claim 5, Sears discloses the menu items are prearranged within logical areas and the step of adapting the menu structure is performed by rearranging the menu items within their respective logical areas (i.e. *"Frequency based orderings typically refer to placing the most frequently used item at the top of the of the menu, followed by the next most frequently used item. This continues until all items are places in the menu."* The preceding text excerpt clearly indicates that if the respective selection rate (e.g. frequency of selection) of a particular menu item were to change, that it may cause a move in its position. For example, if a menu item were to change from being the second most selected item to them most selected item in the menu, it would be moved to the top of the menu. Note that the menu items, before any frequency data is collected, will appear in some prearranged order by default (for example, an alphabetical ordering as shown in Figure 1), and that once frequency data is collected the menu will begin to be rearranged. Also note that, as shown in Figure 1, all menu items are arranged into one logical area, in which they are then rearranged.) (Page 29, Paragraph 4; Page 32, Figure 1).

As per Claim 6, Sears discloses the step of calculating a new menu structure dependent on collected data about the respective selection rates of the menu items within the current menu structure prior to the step of adapting (i.e. *"Tables II-IV describe how frequently each menu item was selected for each of the three menu organizations for Distributions One, Two, and Three respectively."* The preceding text excerpt along with tables II-IV clearly indicate that data is collected about the frequency of menu selection (e.g. a tracking of the number of times each menu item is selected) prior to adapting the menu structure (e.g. this data would have to be collected in order to determine the frequency of menu items, which is needed to perform the frequency re-ordering from a

default configuration, such as shown in Figure 1).) (Page 32, Figure 1; Page 38, Paragraph 3; Page 39, Figures II-IV).

As per Claim 7, Sears discloses the step of collecting data about respective selection rates and the step of providing a proposal for the adaptation prior to the step of adapting (i.e. *"Sort all items by selection frequency. Starting with the least frequently selected items, scan until the increase in frequency between two successive items is greater than the mean of the frequencies... Tables II-IV describe how frequently each menu item was selected for each of the three menu organizations for Distributions One, Two, and Three respectively."*) The preceding text excerpt along with Figures II-IV clearly indicate that data is collected about the respective selection rates (e.g. frequency) that can be used to create a proposal for the adaptation (e.g. an ordered list which is scanned prior to creating the menu ordering).) (Page 31, Paragraph 4; Page 38, paragraph 3; Page 39, Tables II-IV).

As per Claim 8, Sears discloses the step of defining a threshold representing a degree of distinction between a new menu structure and the respective current menu structure and in response to the reaching of the threshold the step of providing a proposal for a new menu structure (i.e. *"We developed preliminary guidelines which help decide which items should be placed in the high frequency section of a split menu... 2. Sort all items by selection frequency. Starting with the least frequently selected items, scan until the increase in frequency between two successive items is greater than the mean of the frequencies. Once this point is located, all items on the high frequency side of this point are placed in the high frequency section. If there are more than four items, only the four most frequently selected items are placed in the high-frequency section."*) The preceding text excerpt clearly indicates a threshold is established/defined which represents how the menu is to be arranged and when a new menu item which is not in the high frequency section reaches this

threshold, a new menu defined to replace the current menu structure, the first step of which includes following the proposal steps/preliminary guidelines.) (Page 31, Paragraph 2-4).

As per Claim 9, Sears discloses the reaching of the threshold is monitored by counting one for every menu item in a new structure that has no corresponding match in the current menu structure (i.e. *"Tables II-IV describe how frequently each menu item was selected for each of the three menu organizations for Distributions One, Two, and Three respectively."* The preceding text excerpt along with tables II-IV clearly indicate that data is collected/monitored about the frequency of menu selection (e.g. a tracking of the number of times each menu item is selected). A count is assigned each time a menu item is selected, including those not in the high-frequency section. The threshold, as disclosed above, would only be reached if the count of a menu item which was not in the high frequency section exceeded the count of a menu item which was in the high frequency section. If the menu structure is taken to be the high frequency section (because in this case, only the positions of menu items in the high frequency section is altered by selection frequency) then by counting one for every selection of a menu item not in the menu structure (i.e. not in the high frequency section) the threshold can be reached if the count of a menu item which is not in the menu structure exceeds the count of a menu item which is in the menu structure (i.e. in the high frequency section.)) (Page 32, Figure 1; Page 38, Paragraph 3; Page 39, Figures II-IV).

As per Claim 10, Sears discloses an electronic device, comprising means for indicating menu items which can be selected from an operating menu structure implemented in said electronic device (i.e. *"Menus are an increasingly popular way of interacting with computers...The font menus contained 28 items."* The preceding text excerpt clearly indicates that menus provide selectable access to menu items within a computer system/operating menu structure implemented in an electronic device, and that menus may have a predetermined number of menu items.)



(Page 27, Paragraph 1; Page 36, Paragraph 2), and means for adapting the menu structure by rearranging menu items dependent on the respective selection rate of said menu items (i.e. *"Several researchers have suggested organizing menu items by how frequently they are selected."*) The preceding text excerpt clearly indicates that menu structure (e.g. the organization of the menu items) may be rearranged based/dependent on how frequently they are selected (e.g. the respective selection rates of the menu items.) (Page 28, Paragraph 3).

As per Claim 11, Sears discloses a counter and means for respectively incrementing the counter value assigned to a menu item in response to a selection of said menu item (i.e. *"Tables II-IV describe how frequently each menu item was selected for each of the three menu organizations for Distributions One, Two, and Three respectively."*) The preceding text excerpt along with tables II-IV clearly indicate that data is collected about the frequency of menu selection (e.g. a tracking of the number of times each menu item is selected). Note that a counter for each respective menu item which increments each time that menu item is selected would have to be present in order to collect this data.) (Page 32, Figure 1; Page 38, Paragraph 3; Page 39, Figures II-IV).

As per Claim 12, Sears discloses means for assigning to each selected menu item a respective reference value representing the amount of selections of said menu item (i.e. *"Tables II-IV describe how frequently each menu item was selected for each of the three menu organizations for Distributions One, Two, and Three respectively."*) The preceding text excerpt along with tables II-IV clearly indicate that data is collected about the frequency of menu selection (e.g. a tracking of the number of times each menu item is selected). Note that a counter for each respective menu item which increments each time that menu item is selected would have to be present in order to collect this data. Also note that the number of selections can be considered the respective reference value.) (Page

32, Figure 1; Page 38, Paragraph 3; Page 39, Figures II-IV) and means for updating said reference value each time the associated menu item is selected (i.e. *"Tables II-IV describe how frequently each menu item was selected for each of the three menu organizations for Distributions One, Two, and Three respectively."* The preceding text excerpt along with tables II-IV clearly indicate that data is collected about the frequency of menu selection (e.g. a tracking of the number of times each menu item is selected). Note that a counter for each respective menu item which increments each time that menu item is selected would have to be present in order to collect this data. Also note that the number of selections can be considered the respective reference value.) (Page 32, Figure 1; Page 38, Paragraph 3; Page 39, Figures II-IV).

As per Claim 13, Sears discloses means for comparing a current menu structure with a calculated new menu item, a programmable microprocessor, and at least one storage associated therewith (i.e. *"Frequency based orderings typically refer to placing the most frequently used item at the top of the of the menu, followed by the next most frequently used item. This continues until all items are places in the menu."* The preceding text excerpt clearly indicates that a current menu structure may be compared with new data pertaining to a new menu structure, or the inclusion of a new menu item in order to re-order the menu structure or add the new menu item.. Note that a microprocessor to perform the comparison and a storage means to store the data would both be needed in order to perform these operations.) (Page 29, Paragraph 4; Page 32, Figure 1).

As per Claim 14, Sears discloses means for activating the adaptation of the menu structure (i.e. *"Frequency based orderings typically refer to placing the most frequently used item at the top of the of the menu, followed by the next most frequently used item. This continues until all items are places in the menu."* The preceding text excerpt clearly indicates that if the current menu structure becomes out of date (e.g. if the menu items are no longer in an order consistent with the

frequency of their selections) the menu structure will be adapted to put the menu items in the correct order.) (Page 29, Paragraph 4; Page 32, Figure 1). and means for activating a learning mode prior to activate the adaptation (i.e. *"Tables II-IV describe how frequently each menu item was selected for each of the three menu organizations for Distributions One, Two, and Three respectively."* The preceding text excerpt along with tables II-IV clearly indicate that a learning mode is activated by menu selections (e.g. a tracking of the number of times each menu item is selected) prior to adapting the menu structure (e.g. this data would have to be collected in order to determine the frequency of menu items, which is needed to perform the frequency ordering).) (Page 38, Paragraph 3; Page 39, Figures II-IV).

As per Claim 15, Sears discloses an implemented menu structure divided into logical areas (i.e. *"Frequency based orderings typically refer to placing the most frequently used item at the top of the of the menu, followed by the next most frequently used item. This continues until all items are places in the menu."* The preceding text excerpt clearly indicates that, as shown in Figure 1, all menu items are arranged into one logical area, and, as shown by Figure 2, the menu items may be arranged into multiple logical areas.) (Page 29, Paragraph 4; Page 32, Figure 1; Page 33, Figure 2).

As per Claim 16, Sears discloses means for calculating a new menu structure dependent on collected data about the respective selection rates *"Tables II-IV describe how frequently each menu item was selected for each of the three menu organizations for Distributions One, Two, and Three respectively."* The preceding text excerpt along with tables II-IV clearly indicate that data is collected about the frequency of menu selection (e.g. a tracking of the number of times each menu item is selected) which may then be used to calculate a new menu structure.) (Page 32, Figure 1; Page 38, Paragraph 3; Page 39, Figures II-IV)

As per Claim 17, Sears discloses means for collecting data about respective selection rates and means for providing a proposal for the adaptation of the menu structure (i.e. *"Sort all items by selection frequency. Starting with the least frequently selected items, scan until the increase in frequency between two successive items is greater than the mean of the frequencies... Tables II-IV describe how frequently each menu item was selected for each of the three menu organizations for Distributions One, Two, and Three respectively."* The preceding text excerpt along with Figures II-IV clearly indicate that data is collected about the respective selection rates (e.g. frequency) that can be used to create a proposal for the adaptation (e.g. an ordered list which is scanned prior to creating the menu ordering.) (Page 31, Paragraph 4; Page 38, paragraph 3; Page 39, Tables II-IV).

As per Claim 18, Sears discloses for monitoring a predefined or definable threshold representing a degree of distinction between a new menu structure and the respective current menu structure (i.e. *"We developed preliminary guidelines which help decide which items should be placed in the high frequency section of a split menu... 2. Sort all items by selection frequency. Starting with the least frequently selected items, scan until the increase in frequency between two successive items is greater than the mean of the frequencies. Once this point is located, all items on the high frequency side of this point are placed in the high frequency section. If there are more than four items, only the four most frequently selected items are placed in the high-frequency section."* The preceding text excerpt along with Table II-IV clearly indicate a threshold is established/defined which represents how the menu is to be arranged and when a new menu item which is not in the high frequency section reaches this threshold, a new menu is defined to replace the current menu, the first step of which includes following the proposal steps/preliminary guidelines. Also note Tables II-IV show that data about selection rates of menu items may be monitored, and used for threshold detection.) (Page 31, Paragraph 2-4).

As per Claim 19, Sears discloses the means for monitoring the threshold is designed to count one for every menu item in a new structure that has no corresponding match in the current menu structure (i.e. *"Tables II-IV describe how frequently each menu item was selected for each of the three menu organizations for Distributions One, Two, and Three respectively."* The preceding text excerpt along with tables II-IV clearly indicate that data is collected/monitored about the frequency of menu selection (e.g. a tracking of the number of times each menu item is selected). A count is assigned each time a menu item is selected, including those not in the high-frequency section. The threshold, as disclosed above, would only be reached if the count of a menu item which was not in the high frequency section exceeded the count of a menu item which was in the high frequency section. If the menu structure is taken to be the high frequency section (because in this case, only the positions of menu items in the high frequency section is altered by selection frequency) then by counting one for every selection of a menu item not in the menu structure (i.e. not in the high frequency section) the threshold can be reached if the count of a menu item which is not in the menu structure exceeds the count of a menu item which is in the menu structure (i.e. in the high frequency section.).) (Page 32, Figure 1; Page 38, Paragraph 3; Page 39, Figures II-IV).

As per Claim 20, Sears discloses means for graphically depicting the menu structure and menu items arranged within said menu structure and means for selecting the menu items, by controlling the means for graphically depicting (i.e. It is well known in the art that a monitor which is controlled by a computer may be used as a means for graphically depicting menus, including the structure of menus and menu items which are arranged within the menu structure and may be selected. It is also well known in the art that a mouse pointer, which is also displayed on the monitor, may be used as a means for selecting said graphically depicted menu items.).

As per Claim 21, Sears discloses control means comprising a key board with at least some keys respectively assigned to specific menu items, wherein the control means comprises a touch sensitive display or is speech-operated (i.e. *"One alternative is to assign special key combinations that can be used to select these frequently used items."* The preceding text excerpt clearly indicates that keys can be assigned to specific menu items (e.g. the frequently used menu items.) (Page 28, Paragraph 2).

### ***Points of Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Hicks whose telephone number is (571) 272-2670. The examiner can normally be reached on Monday - Friday 8:30a - 5:00p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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